

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**  
MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0127710

Owner: Ameren UE  
Address: One Ameren Plaza, St. Louis, MO 63166

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Ameren UE, Peno Creek Energy Center  
Address: 16303 Pike 43, Bowling Green, MO 63334

Legal Description: SW ¼, SW ¼, Sec. 22, T53N, R3W, Pike County

Receiving Stream: Tributary to Peno Creek (U) losing stream  
First Classified Stream and ID: Peno Creek (C) (00099)  
USGS Basin & Sub-watershed No.: (07110007-030005)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

**FACILITY DESCRIPTION**

Outfall #001 - Generating Station - SIC #4911

Fuel Oil tank containment for 4 - 55.4 megawatt(mw) electric generator/oil & water separator.

Drainage to detention basin.

Outfall #002 - Generating Station - SIC #4911

Stormwater runoff from 4 - 55.4 mw dual fired gas/diesel electric generator.

Drainage to detention basin.

Design flow is greater than 1 MGD.

22 acres total industrial drainage area (10-year, 24-hour rainfall event = 5 inches)

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

June 14, 2002

Effective Date

July 12, 2002

Revised

  
Stephen M. Mammoser, Director, Department of Natural Resources  
Executive Secretary, Clean Water Commission

Director of Staff, Clean Water Commission

June 13, 2007

Expiration Date  
MO 780-0041 (10-93)

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 2 of 4	
					PERMIT NUMBER MO-0127710	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> - Fuel oil tank containment/oil and water separator						
Flow	MGD	*		*	once/quarter**	24 hr. estimate
Oil & Grease	mg/L	15		10	once/quarter**	grab
pH - Units	SU	****		****	once/quarter**	grab
<u>Outfall #002</u> - Stormwater detention basin						
Flow	MGD	*		*	once/quarter**	24 hr. estimate
Rainfall	inches	*		*	daily measurement	
Biochemical Oxygen Demand <sub>5</sub>	mg/L	*	65	45	once/quarter**	***
Total Suspended Solids	mg/L	*	110	70	once/quarter**	***
Total Settleable Solids	ml/L/hr	2.5		1.7	once/quarter**	***
Oil & Grease	mg/L	15		10	once/quarter**	***
Total Petroleum Hydrocarbons	mg/L	*		*	once/quarter**	***
Benzene	mg/L	*		*	once/quarter**	***
Ethylbenzene	mg/L	*		*	once/quarter**	***
Toluene	mg/L	*		*	once/quarter**	***
Xylenes (Total)	mg/L	*		*	once/quarter**	***
MTBE	mg/L	*		*	once/quarter**	***
Conductivity	microhos/ cm @ 25 °C	*		*	once/quarter**	***
pH - Units	SU	****		****	once/quarter**	***
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2002</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- \* Monitoring requirement only.
- \*\* Sample once per quarter in the months of March, June, September, and December.
- \*\*\* Grab samples shall be collected during a rainfall event, when there is runoff from the site. The sample shall be collected no later than one hour after runoff begins.
- \*\*\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.
4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
    - (1) One hundred micrograms per liter (100 µg/L);
    - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
    - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
    - (4) The level established in Part A of the permit by the Director.
  - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
5. Report as no-discharge when a discharge does not occur during the report period.

C. SPECIAL CONDITIONS (continued)

6. General Criteria. The following water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
- (a) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
  - (b) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
  - (c) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
  - (d) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
  - (e) There shall be no significant human health hazard from incidental contact with the water;
  - (f) There shall be no acute toxicity to livestock or wildlife watering;
  - (g) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
  - (h) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.



Missouri Department of Natural Resource  
Water Pollution Control Program  
Planning Section

Water Quality Review Sheet  
Determination of Effluent Limits

Facility Information

FACILITY NAME: Ameren UE - Peno Creek Energy Center NPDES #: 0127710

FACILITY TYPE/DESCRIPTION: Generating Station (SIC #4911)

ECOREGION: Central Irregular Plains 8- DIGIT HUC: 07110007 COUNTY: Pike  
Central Irregular Plains Osage Plains  
Mississippi Alluvial Plains Ozark Highlands

LEGAL DESCRIPTION: SW Sec.22, T53N, R3W LATITUDE/LONGITUDE: 39.34694/-91.23472

WATER QUALITY HISTORY: None - new facility

Outfall Characteristics

OUTFALL	DESIGN FLOW (CFS)	TREATMENT TYPE	RECEIVING WATERBODY	OTHER
001	Stormwater	None	Peno Creek	
002	Stormwater	None	Peno Creek	

Receiving Waterbody Information

WATERBODY	CLASS	7Q10(CFS)	*DESIGNATED USES	OTHER CHARACTERISTICS
Peno Creek	U	0.0	None	Losing stream
Peno Creek	C	0.0	LWW, AQL, CLF	Losing stream

\*Cool Water Fishery (CLF), Cold Water Fishery (CDF), Irrigation (IRR), Industrial (IND), Boating & Canoeing (BTG), Drinking Water Supply (DWS), Whole Body Contact Recreation (WBC), Protection of Warmwater Aquatic Life and Human Health (AQL), Livestock & Wildlife Watering (LWW)

COMMENTS: Stormwater discharge to unclassified portion of Peno Creek (losing). The facility is approximately 2 miles from losing portion of Peno Creek listed in 10 CSR 20-7.031, Table J

MIXING CONSIDERATIONS

Mixing Zone. N/A

Zone of Initial Dilution (Z.I.D.). N/A

Permit Limits And Information

TMDL WATERSHED: ☐ N ☐ W.L.A. STUDY CONDUCTED: ☐ N ☐ DISINFECTION REQUIRED: ☐ N ☐ DISINFECTION WAIVER: ☐ NA  
(Y OR N) (Y OR N) (Y OR N) (Y, N, NA)

OUTFALL# 001

WET TEST (Y OR N): ☐ N FREQUENCY: N/A A.E.C. N/A LIMIT: N/A

PARAMETER	UNITS	MAXIMUM DAILY LIMIT	AVERAGE MONTHLY LIMIT	COMMENTS
Flow	MGD	*	*	monitoring only
pH	SU	6 - 9	6 - 9	
Oil and Grease	mg/L	15	10	

**OUTFALL# 002**WET TEST (Y OR N): ☐ N FREQUENCY: N/A A.E.C. N/A LIMIT: N/A

PARAMETER	UNITS	MAXIMUM DAILY LIMIT	AVERAGE MONTHLY LIMIT	COMMENTS
Flow	MGD	*	*	Monitoring Only
Precipitation	inches	*	*	Monitoring Only
Conductivity	µmhos/cm	*	*	Monitoring Only
pH	SU	6 - 9	6 - 9	
Biochemical Oxygen Demand	mg/L			Recommend Setting BAT Limits
Total Suspended Solids	mg/L			Recommend Setting BAT Limits
Total Settleable Solids	mg/L			Recommend Setting BAT Limits
Total Petroleum Hydrocarbons	mg/L			Recommend Setting BAT Limits
Oil and Grease	mg/L	15	10	
Benzene	mg/L	*	*	Monitoring Only
Ethylbenzene	mg/L	*	*	Monitoring Only
Toluene	mg/L	*	*	Monitoring Only
Xylenes (Total)	mg/L	*	*	Monitoring Only
MTBE	mg/L	*	*	Monitoring Only

**Receiving Water Monitoring Requirements**

No in-stream monitoring requested at this time.

**Derivation and Discussion of Limits**

Stormwater discharge to losing, unclassified segment of Peno Creek; Losing stream limits used were applicable. Monthly average effluent limits are based on "chronic" aquatic-life protection values from Missouri's water quality standards. Daily maximum effluent limits are 1.5 times monthly average effluent limits to account for dilution (assuming upstream flow).

**Outfall 001:**

- pH. Criterion, 10 CSR 20-7.031(4)(E).
- Oil and Grease. Criterion from 10 CSR 20-7.031 (Table A); 15 mg/L daily maximum, 10 mg/L monthly average.

**Outfall 002:**

- pH. Criterion, 10 CSR 20-7.031(4)(E).
- Biochemical Oxygen Demand. Recommend setting BAT limits.
- Total Suspended Solids. Recommend setting BAT limits.
- Total Settleable Solids. Recommend setting BAT limits.
- Total Petroleum Hydrocarbons. Recommend setting BAT limits.
- Oil and Grease. Criterion from 10 CSR 20-7.031 (Table A); 15 mg/L daily maximum, 10 mg/L monthly average.
- Benzene. Monitoring requirement only.
- Ethylbenzene. Monitoring requirement only.
- Toluene. Monitoring requirement only.
- Xylenes (Total). Monitoring requirement only.
- Methyl tertiary-butyl ether (MTBE). Monitoring requirement only.

Reviewer: JH  
Date: 3/19/02  
Unit Chief: MD